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IN THE US PATENT AND TM OFFICE

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Appn. No.: 09/942,439
Filing Date: 08/30/01
Applicant: Sekendur, Oral F.
Appn. Title: **One Visit Dental Prosthesis**
Examiner: Ralph A. Lewis Mailed: 3/5/04
Group: 3300 Chicago, IL
Art Unit: 3732

Commissioner of Patents and Trademarks
Washington, District of Columbia 20231

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Date: 3/5/04

Applicant

Oral Sekendur

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RESPONSE TO OFFICE ACTION MAILED 12/8/03

Response to Objections to Duplicate Claims

1. Upon approval of Application or conference with Examiner, Applicant will amend claims to overcome Examiner's objection to Claims 8 and 12 as being identical to Claims 2 and 6.

Response to Rejection based on Prior Art

2. THE PRESENT APPLICATION DOES NOT USE WAX OR THE LIKE. BOTH ALEXANDER AND SHORER USE WAX OR SOMETHING LIKE WAX.

Alexander

3. The present invention does not comprise a "binder" or "lubricant" as in **Alexander** (US 1,040,972), which teaches "a plastic metal" of "finely divided or powdered metal, as gold which is bound together by a binder" (page 1, lines 19-21), or a "sponge gold" or "moss gold" (page 1, line 28) coated by a wax-like substance described as a lubricant. On page three of the Office Action, the Examiner states: "More particularly, the elimination of an element (the lubricant) and the subsequent loss of its function (helping to hold the fibers in union and prevent adhesion (page

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1, lines 35-37)) is generally considered to be obvious to the ordinarily skilled artisan and not patentable.” The Examiner’s statement indicates that the examiner is misunderstands the present Application in relation to Alexander. The present Application does not need or use a waxy lubricant, in part, because the present Application does not use or require investing and casting.

4. The present invention does not employ the investment/cast technique and is an improvement because, in part, because it eliminates the steps of investing, dissipating or casting. **Alexander** teaches forming its “plastic metal” intra-orally (page 1, lines 86-91), removing the “plastic metal” and then employing the “plastic metal” “in exactly the same manner that the wax is employed in the ordinary casting of a dental inlay.” This includes investing, dissipating the wax and casting molten metal (page 1 lines 95-106). The present invention does not comprise investing, dissipating or casting. The elimination of wax and casting is precisely the point.

5. On page three of the Office Action, the Examiner states: “After shaping, the formed metallic fibers are apparently removed from the platform and a solder joining means is employed between the fibers for forming a solid rigid metallic dental structure.” The Examiner refers to page 1, lines 102-106 in Alexander. This statement is inaccurate. Alexander does not teach what the Examiner states. Alexander uses the term “molten metal” interchangeably with the term “solder” and states that “The Plastic metal is then employed in exactly the same manner that the wax is employed in the ordinary casting of a dental inlay although investing, dissipating of the waxy binder and the introduction of the molten metal is much less complicated than ordinarily practiced.” Alexander clearly teaches an investment/cast technique, and does not teach a soldering technique. Alexander uses the term solder to indicate that the melting point of the “molten metal” is lower than the “metallic mass” or “sponge gold” that is left in the crucible after “the wax binder” is dissipated.

6. After dissipating the “wax binder”, the entire “metallic mass/sponge gold” is left inside the crucible, ready for casting, just as in the conventional investment/cast technique. The difference between Alexander and the conventional investment/cast technique is the means employed to get the “molten metal” inside the “crucible. The conventional technique uses centrifugal force. Alexander uses “capillary attraction” to draw the molten metal into the mold. (page 1, lines 102-106) In this sentence, the Applicant believes Alexander missuses the term “metallic mass”. The Applicant believes Alexander means to use the term “molten metal”, since the “metallic mass is not drawn into the crucible because it is clearly already invested inside the crucible. It is the “molten metal” that is drawn into the crucible using the capillary attraction of the “metallic mass”.

Shoher

7. The present Application does not use wax or the like. Examiner argues **Shoher** discloses Applicant’s “formable metal” described as a “paste of flux and metal powder”. **Shoher** et al does not provide a “formable metal” as alleged by the Examiner. Instead, Shoher provides a moldable **wax** composition comprising metal particles. (column 2, lines 48-51). On the other hand, the Applicant provides a metal screen, metal mesh, metal felt, sintered metal fibers or the like (Claims 5 and 11). The Applicant does not provide for metal particles in a moldable **wax**. The metal particles in Shoher, in themselves, are not formable. Only Shoher’s **wax** is formable. The important distinction is that **Shoher** comprises a “wax binder” (Claim 1 in Shoher) that has to be burned away. “Filler material is then added to the porous structure and heat treated to form a “dense solid coping”, as shown in FIG. 4. (column 5, line 31-33).”

8. The Examiner argues that **Shoher's** "metal particles" comprise features of the "formable metal" in the present invention. This is not true. In fact, the metal particles in Shoher are not formable. Only, the wax is formable.

9. The Examiner confuses Shoher's "wax binder" with the Applicant's "joining means". The Examiner argues that **Shoher's** "wax binder" (Claim 1 in Shoher) comprises features of the "joining means" in the present Application. This statement is not accurate. **Shoher's** "wax binder" is burned away or absorbed by the die before a "joining means" is applied. The "wax binder" is only used to shape the coping on the die, and is completely heat dissipated to form a "porous structure". Only then, is the "joining means applied" to the "porous structure" to "form a dense solid coping." (col. 5, lns. 23-33) the present Application eliminates the step of forming the "porous structure" and instead uses a "formable metal." The "joining means" is applied to the "formable metal." The Applicant's "joining means" comprising a "paste of flux and metal powder", the flux is not burned away but acts to clean and free the "formable metal" from oxide and promote the union of metal and solder. The metal powder acts as "solder" in the present invention, and there is no wax to be burned away.

10. Shoher does not provide for the shaping of the formable metal on the working platform as in the present Application. Instead, Shoher provides for the moldable wax composition to be shaped on a die, whereby the wax has to be burned away.

11. The steps in forming the coping in Shoher include: a) forming the wax coping on a "working platform", b) heat treating the wax coping to dissipate the wax and sinter the larger high fusing particles using the smaller low fusing particles that were in the wax to form a porous structure, c) adding filler material and heat treating to form a dense solid coping. (col. 5, lns. 23-33) Heat treating Shoher's wax "mixture comprising particles (column 8, line 24) allegedly forms a

porous structure (column 8, line 34) which must be filled with a filler material (column 8, line 37). The present Application changes step “a” and entirely eliminates step “b” in Shoher. These are the steps in Shoher used to form the “spongy structure” from particles sintered together. In the present Application, “spongy structure” or “formable metal” is already bound together in the form of a mesh or the like, and is not made of independent particles held together by wax or binder. The present Application uses the steps: a) forming the “formable metal” coping on a “working platform”, c) adding “filler material” or “joining means” and heat treating to form a dense solid coping. In the present application, heat-treating does not form a porous structure that has to be filled. This is an extra step in Shoher. Heat-treating the present invention actually forms the solid Dental Prosthesis.

12. The art taught in Shoher does not work. Heat-treating the wax composition causes the wax to melt and flow, distorting the form of the high and low fusing particles that are supposed to form the “porous structure”. The metal particles flow and distort as the wax melts and flows at a lower temperature of less than 100 degrees centigrade. Whereas, the low fusing particles in Shoher melt at over ten times the temperature of 1063 degrees centigrade (Example I in Col. 5). There is no means in Shoher to hold the metal particles on the die when wax is melted. The presently commercially available version of Shoher solves this problem by placing a mold made of investment material around the formed wax. A mold provides a reservoir for the molten metal to flow into the mold to form to the desired shape. Without a mold, the melting wax pulls and distorts the metal particles off the die.

13. Examiner rejects Claims 2, 6 and 8-20 based on 35 U.S.C. 103(a) over **Alexander** and states that polishing and cleaning, and further adding an outer porcelain or acrylic layer to the prosthesis is obvious. It is the Applicant’s position that, in combination with Applicant’s other

unique features, these features, including polishing and cleaning, and further adding an outer porcelain or acrylic layer to the prosthesis, are patentable.

14. The Examiner rejects Claims 14-20 based on 35 U.S.C. 103(a) over **Alexander** and states that cementing a patient's tooth is obvious. Applicant is combining this feature with other features, including "a formable metal" and "shaping said formable metal on said working platform to form a metal structure". It is the Applicant's position that, in combination with Applicant's other unique features, these features, including cementing a patient's tooth, are patentable.

The Applicant requests a telephone interview with the Examiner to discuss acceptable claims in the Application (tel. 312-804-8474). The Applicant has made this request in other responses to office actions in the past. To date, Applicant has not been granted an interview.

It is submitted that patentable subject matter is clearly present. If the Examiner agrees, but does not feel that the present claims are technically adequate, the Applicant respectfully requests that the Examiner write acceptable claims pursuant to MPEP 707.07(j). The Applicant has made this request in other responses to office actions in the past. To date, the Examiner has not written acceptable claims.



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